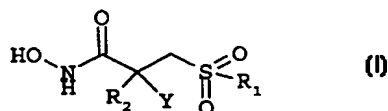




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(21) International Application Number: PCT/IB98/02154 (22) International Filing Date: 18 November 1998 (18.11.98) (30) Priority Data: 60/072,655                      21 November 1997 (21.11.97)      US (71) Applicant (for all designated States except US): PHARMACIA & UPJOHN COMPANY [US/US]; 301 Henrietta Street, Kalamazoo, MI 49001 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): WARPEHOSKI, Martha, A. [US/US]; 7600 Currylane, Portage, MI 49024 (US). MITCHELL, Mark, Allen [US/US]; 1628 Dover Road, Kalamazoo, MI 49008 (US). HARPER, Donald, E. [US/US]; 11520 Channel Drive, Plainwell, MI 49080 (US). MAGGIORA, Linda, Louise [US/US]; 4400 Glenrose Terrace, Kalamazoo, MI 49008 (US).			(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>Without international search report and to be republished upon receipt of that report.</i>

(54) Title:  $\alpha$ -HYDROXY, -AMINO, AND HALO DERIVATIVES OF  $\beta$ -SULFONYL HYDROXAMIC ACIDS AS MATRIX METALLOPROTEINASES INHIBITORS



## (57) Abstract

The present invention provides a compound of formula (I), or pharmaceutical acceptable salts thereof wherein  $R_1$  is  $C_{4-12}$  alkyl,  $C_{4-12}$  alkenyl,  $C_{4-12}$  alkynyl,  $-(CH_2)_h-C_{3-8}$  cycloalkyl, substituted and unsubstituted  $-(CH_2)_h$ -aryl, substituted and unsubstituted  $-(CH_2)_h$ -het,  $R_2$  is substituted and unsubstituted  $C_{1-12}$  alkyl, substituted and unsubstituted  $C_{2-12}$  alkenyl, substituted and unsubstituted  $C_{2-12}$  alkynyl, substituted and unsubstituted  $-(CH_2)_h-C_{3-8}$  cycloalkyl, substituted and unsubstituted  $-(CH_2)_h-C_{3-8}$  cycloalkenyl, substituted and unsubstituted  $-(CH_2)_h$ -aryl, substituted and unsubstituted  $-(CH_2)_h$ -heterocyclic ring, substituted and unsubstituted  $-(CH_2)_i-X-R_4$  (X is  $-O-$ ,  $-S(=O)_2-$ ,  $-NR_7-$ ,  $-S(=O)_2NR_8-$ , or  $-C(=O)-$ ), and  $-(CH_2)_jCHR_5R_6$ . The compounds are inhibitors of matrix metalloproteinases involved in tissue degradation.